Significant Water Management Issues

Ballinderry Local Management Area Action Plan and Update

December 2013

An Agency within the Department of the Environment
www.doeni.gov.uk

INVESTORS IN PEOPLE

NIEA Northern Ireland Environment Agency
www.doeni.gov.uk/niea

LMA Action	Progress Update
Organise two CSG meetings per year to provide an open forum for discussion on water issues and encourage involvement in developing and implementing the Ballinderry Local Management Area Plan	Two meetings are arranged every year. Detail of the meetings are located at http://www.doeni.gov.uk/niea/water-home/wfd/public_partic_3/catchment_stakeholder_groups/upper_neagh_bann.htm
Promote and encourage local projects through WATER Environment Community awards	Awards for 2011 where promoted through CSG meetings, NIEA website and e-mail. The winning entries received £1000 for their environmental improvement projects on 26th May 2011. The winner from the Upper Neagh Bann CSG area, was the Ballinderry Clean Stream Initiative (Ballinderry River Enhancement Association). Water Quality Improvement Grant promoted in 2012 and 2013. RiverCare staff successfully bid for the grant and undertook studies of pressures on the Aghaveagh streams, Claggan and Salterstown Burn.
Highlight external funding opportunities for water management projects to local partners	Publicised NIEL Challenge fund to stakeholders.
Promote NIEA Water Pollution Hotline through advertising, promotion and signage	The official launch of the LMA pollution hotline signage project took place on 18th April 2011 with NIEA Chief Executive John McMillan. The allocated 15 signs have been located throughout the Ballinderry catchment in agreement with BREA. The pollution hotline number is promoted frequently by NIEA events, publications and relevant websites.
Support pollution prevention campaigns such as NIW's Bag it and Bin it Campaign, Local river clean ups etc.	NIEA support relevant water quality enhancing campaigns by distributing promotional material. A local river clean up initiative was funded in the Ballinderry via the NIEA Water Environment Community Awards.
Develop leaflets and articles to promote effective farm nutrient and waste management	'Water Quality Plans in Action' article published in Farming Life. A DARD and NIEA poster featuring local farmer contribution to improving water quality within LMA's has been produced and is displayed in relevant venues. Article raising the profile of the Freshwater Pearl Mussel published in the Farming Life.
Raise awareness and promote the benefits of effective farm nutrient and waste management	All applicants to DARD agri-environment schemes receive a farm waste management advisory visit as part of their application to the scheme. DARD have produced a Code of Good Agricultural Practice which contains practical management advice on how farm wastes such as silage effluent, slurry and manure can be collected, stored and spread with minimum risk to the environment. DARD has developed an agri-environment training course for farmers dealing with farm wastes and nutrient management planning. NIEA delivered a Water Framework Directive awareness talk to CAFRE students in April 2011. Article raising the profile of the Freshwater Pearl Mussel published in the Farming Life.
Raise awareness of the issue of pesticide use and disposal. Promote best practice in the use of pesticides on farms.	NIEA, UFU, NIW and CAFRE coordinated a workshop on raising awareness on pesticides at Loughry College on 15th March 2011. Attendees including UFU, NIW, DARD, local stakeholders & farmers, Forest Service, Donegal County Council, AFBI, Voluntary Initiative(VI) members. A working group has been established; membership includes NIW, DARD (Forest Service, Rivers Agency, Countryside Management Branch) UFU, NIEA, DRD Roads Service, A webpage to raise public awareness and provide guidance has been produced: http://www.doeni.gov.uk/niea/water-home/wfd/public_partic_3/pesticide_awareness.htm

Encourage riparian zone management with an aim to improve biodiversity and minimise sedimentation through practical management measures on farms	A measure within the Nitrates Action Programme is that all farms must carry out crop and soil management to minimise soil erosion and nutrient runoff. This is verified during cross-compliance visits.
Complete the phosphorus nutrient budget work for Northern Ireland	Nutrient budgets are being analysed alongside SIMCAT (SIMulation of the water quality of CATchments) models developed to represent the behaviour of flow and pollutants in rivers. This will inform actions to address diffuse and point source nutrient inputs to the water environment.
Conduct LMA investigative surveys to assess benthic invertebrates	Water Management Unit (WMU) freshwater team sampled 69 additional sites as part of an investigative programme for the Ballinderry LMA. Investigations involved site assessments, kick sampling and invertebrate identification. The sampling was conducted during May and June 2011. A series of river walks was then conducted to investigate and where possible address the factors contributing to declines in biotic scores. 11 further sites where sampled in the summer 2013 to guide further investigations within the Claggan catchment.
Create inventory of physical structures in the river channel and apply the UK Fish Passability tool to identify selected obstacles which are causing a barrier to fish migration.	An inventory has been established and will continue to develop with input from NIEA staff and stakeholders. BREA completed an assessment of barriers to fish migration in the Ballinderry catchment which assisted in this process.
Raise awareness of the impact of misconnections where they have been identified to be causing deterioration in water quality.	NIEA, have produced and distributed leaflets to raise awareness among householders of misconnections. NIEA are investigating the possibility of working with councils to distribute these leaflets.
NIEA to provide support to relevant actions within the Rivers Involving People, Places and Leading by Example (RIPPLE) Action Plan.	RIPPLE actions supported or provided by NIEA have included provision of 15 waterside signs, attendance at the Banks of the Ballinderry Fair on the 28th of May 2011, continued support for the establishment and implementation of the River fly Monitoring initiative and collaboration on an obstacles to fish migration project.
Support effective partnership working, between NIEA and Ballinderry River Enhancement Association (BREA) as the local river trust in the Ballinderry LMA, towards common interests in improving river catchments to bring wider environmental, community and social benefits	NIEA continue to support the establishment and operation of River Trusts in NI including a start up grant, mentoring and advice. NIEA work with BREA to develop and deliver actions which improve the water environment via the LMA plan and RIPPLE project.
Raise awareness of catchment management via relevant press articles and web publications and providing support at local community events.	NIEA participated in the annual 'Banks of Ballinderry Fair' and provided examples of 'good bugs' and 'bad bugs' to allow those attending to assess the water quality of their river. NIEA staff participated in various RIPPLE events. NIEA demonstrated the use of the River Basin Planning Web-mapper at the 2011 Balmoral Show. The first issue of the Ballinderry LMA E-zine was mailed to Ballinderry CSG contacts in May 2011.
Collate existing information on location of aquatic and river bank invasive alien species	During the course of river walks undertaken by NIEA any sightings or suspected sightings of invasive alien species are collated and reported to Invasive Species Ireland
Promote the control of invasive alien species on farmland	NIEA Natural Heritage (NH) have liaised with a range of individuals and groups and provided training and advice in relation to invasive species control. NH have supported the implementation of the RIPPLE action plan in the Ballinderrry by working with BREA to raise awareness of invasives and advice on appropriate methods of control adjacent to waterways.
The River Involving People Places and leading	The first RIPPLE invasives control project, The Drumard Control Project, started in 2009. It focused on

by Example (RIPPLE) project are carrying out a community led invasives species control programme	controlling giant hogweed on the Drumard. This partnership project received funding of £3800 which was used to train 6 volunteers in control techniques and for the purchase of equipment and herbicide. The volunteers have treated the hogweed for a 3 year period. The value of the volunteer time commitment to this project would equate to around £11600. The work of the volunteers has resulted in ensuring there are now no flowering heads plants in the main Drumard. The volunteers are now in a position to control any emergent seedlings from the seedbank. The second RIPPLE invasives control project, The Upper Ballinderry Invasives Control Project, covers an estimated 30km of main river and 45km of tributaries. It is a 4 year project with £18400 of funding which will be used to train more volunteers and to purchase the necessary equipment and herbicide. The project focuses on Japanese knotweed, giant hogweed and Himalayan balsam. The areas of these invasives species are currently being mapped. Control of the manageable sized areas will be completed by volunteers. Phase II of the project will be to cost the control of the more extensive areas of invasives by specialist contractors.
NIEA to provide support to the BREA Anglers Monitoring Initiative (AMI) - A community led water quality monitoring programme.	The AMI pilot was launched on the 14th of February 2011. BREA in conjunction with the Riverfly Partnership have trained 22 volunteers who are presently monitoring monthly riverfly populations at 28 sites in the Ballinderry LMA. NIEA have supported the AMI via the setting of trigger levels and providing appropriate response in the event of trigger level breaches.
Carry out a Rapid Hydro morphology Assessment Technique (RHAT) survey to ground truth an original Heavily Modified Water Body (HMWB) designation on one water body within the Ballinderry LMA	RHAT survey completed by NIEA and a case for de-designation has been recommended in relation to the Ballinderry (Cookstown) waterbody.
Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	Catchment walkover surveys have been completed and have assisted in identifying pressures along with desktop surveys and collation of existing relevant data. This characterisation process will form the preparation of sub-basin plans. INTERREG IV project is has identified measures to be applied to Pearl Mussel catchments to encourage recruitment.
Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	The process of preparing sub-basin plans has commenced and the policy and legislative context for such plans has been the subject of reviews within the project. INTEREG IV project has developed measures that can be applied to FPM catchments. Ballinderry LMA plan will be reviewed in 2013/14 and new measure will be adopted in the FPM catchments.
Assessment of river conditions through research and river surveys to locate sources of sediment	Field surveys have now been completed including FPM macrophyte, phytobenthos, macroinvertebrate and host fish at a number of sites within the catchment. The data from these surveys has been prepared for submission to stakeholder agencies. SCIMAP has been used to focus sediment management measures.
Consider site restoration and protection methods to reduce sedimentation and improve habitat for the Freshwater Pearl Mussel.	A benchmarking review has been carried out to identify best practise measures both Nationally and Internationally. Specific measures relevant to the Ballinderry catchment will be identified in the plans and tailored to local pressures and conditions.
Continue support for the BREA Freshwater Pearl Mussel breeding programme	NIEA Natural Heritage are continue to support Freshwater Pearl Mussel fund.
Monitor fish populations at selected sites. Review other available fish data.	The fish monitoring of the Ballinderry in 2010 showed the status of fish populations to be moderate in the Rock River and Ballinderry River (Corkhill). Further investigation into reasons for this status is required. A digest of fishery data compiled by DCAL and available here. RiverCare continue to collect

	semi quantitive fish data.
Targeted education, advice and regulatory action to prevent pollution and protect the water environment	As an integral part of the Ballinderry river walks completed by NIEA any domestic, agricultural, commercial or industrial premises that were suspected of impacting on water quality received targeted advice or regulatory action as appropriate.
Investigate Dissolved Oxygen suppressions	Ballymully River (Slieve Gallion) is moderate for dissolved oxygen A 10km river walk investigation was completed in this waterbody. A number of agricultural pollution problems were identified and rectified which may help improve dissolved oxygen levels.
Investigate ammonia elevations	Ballymully River (Lower) is moderate for Ammonia, Ballymully River (Upper) and Lissan are upstream of this waterbody. A 10km river walk investigation was completed in the upstream Ballymully River (Upper) River waterbody and agricultural pollution problems were identified and rectified which may reduce the impact on ammonia levels. In 2011 Ammonia levels have fallen and the water body is now classified as high for ammonia.
Assess sources of organic pollution at sites of concern.	Drummard - Agricultural pollution investigated and statutory sample taken and prosecution pending under the Nitrates Directive. Report of poor water quality and fungus investigated and statutory sample taken. Prosecution resulted in fine of £2000. Another prosecution pending. Ballinderry River [Cookstown] - Report of suspended solids investigated and statutory sample taken and prosecution resulted in £800 court fine. Lissan water – Report of agricultural effluent from a pig/poultry unit investigated, statutory sample taken and prosecution pending Commercial premises of concern visited and pollution prevention advice given. An IPRI site within the catchment has a Part A Permit under the Pollution Prevention and Control Regulations (Northern Ireland) 2003. The permit is on the public register and is available to view at Cookstown District Council or the IPRI office in Belfast. There are 5 permitted discharges to the Lissan Water from the IPRI site. The operating IPRI company is required to undertake compliance monitoring of the emissions to water and unannounced check monitoring is also carried out by NIEA. Since approx 2002 the site owners have invested significant amounts of money in upgrading the on-site effluent treatment plant. Following a pollution incident in 2011 an investigation is currently proceeding. Kingsmill – this waterbody may be subject to agricultural pressures and a catchment scale investigation is planned for 2012 Rock River – agricultural and commercial premises of concern visited and appropriate action taken Claggan Water (Skea Bridge) - this waterbody may be subject to agricultural pressures and a catchment scale investigation was carried out in 2012 Gortin Water - report of agricultural effluent was investigated, no signs of pollution were found during the visit but poor invertebrate life was noted. Catchment scale study completed in Ageaveagh Streams. This resulted in a number of farms being breached for impacting upon the water way. Catchment scale study completed in the Claggan.
Targeted river walk surveys to investigate cause of biotic score depression. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed	Approximately 36km of river stretches were investigated within the Ballinderry LMA: Lissan water; 2.5km stretch at Little Bridge, Ballyloughan, Coagh Lissan water; 1.8km stretch at Lismoney, Cookstown. No visible signs of pollution Rock River; 3km stretch above and below Loughbracken Road, Pomeroy Drumard; 12km stretch upstream of Tirnaskea Bridge

sewage fungus.	Ballymully River (Upper);10km stretch upstream of Churchill, Carrydarragh Ballymully (Slieve Gallion); 4.7km stretch above beech hill Ballinderry River (Cookstown); 5.2km stretch up and downstream of the Fairy bridge partially investigated in 2011 and is planned to be completed in 2012 Results from the investigations included, 3 Industrial premises visited and given pollution prevention advice, 2 unconsented premises visited and consent applied for, 3 septic tanks problems identified and consents obtained, 3 statutory samples taken with a view to prosecution, 3 agricultural cross compliance visits and 2 Waste Water Treatment Works (WWTWs) targeted for inspection.
Conduct river walk longitudinal survey to investigate possible causes of invertebrate suppression including agricultural and urban runoff. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	Water Management Unit (WMU) sampled 69 additional sites as part of an investigative programme for the Ballinderry LMA. The LMA biotic scores investigations, conducted NIEA – WMU showed depressed biotic scores in the both the Kingsmill River and Claggan River waterbodies. This prompted River Walks in 2012. Additional walks in Aghaveagh in 2013.
Target Pollution Prevention advice to industrial premises and investigate any unconsented industrial discharges. Where required ensure Water Order consent is obtained.	This action applied to the Ballinderry River [Cookstown] waterbody. 2 unconsented premises were identified, visited and consents applied for.
Carry out compliance assessment of Moneymore WWTW to form future upgrades	An inspection has been carried out on Moneymore WWTWs in 2010 and was found to be compliant with the Water Order Consent. The works has since had 2 new Rotating Biological Contacters and an additional final settlement tank added. The Water Order Consent was reviewed in Feb 2011 to take account of these changes.
Investigate downstream impacts of Pomeroy road WWTW and review performance if necessary.	This small works has been upgraded and is compliant.
Visual inspection of Corvanagh and Tulnacross WWTW's to inform future upgrades	Corvanagh and Tulnacross are small WWTWs which were inspected in 2012
Investigate impact of forestry operations within forestry management units within the Ballinderry LMA.	The total area of Forestry land within the Ballinderry is relatively small and its impact on water quality in planned to be investigated next year.
Investigate the impact of quarrying activities	The Ballinderry LMA is a heavily quarried catchment. NIEA regulate, inspect and monitor quarry discharges as appropriate. Leaflet developed for quarry industry. http://www.doeni.gov.uk/niea/mineral_extraction_industry_screen.pdf
Investigate gravel and sand extraction activities to the south of Cookstown and take appropriate regulatory action where appropriate.	This action applies to the Ballinderry River [Cookstown] waterbody. NIEA regulate quarrying activities and take regulatory action where appropriate.
Investigate the impact of Gammarus Pulex on river ecology in affected tributaries	This action applies to the Ballinderry River (Ballinderry/Coagh) waterbody. Research to investigate the impact of Gammarus Pulex on river ecology has been conducted by Queens University, Belfast.

If you become aware of a water pollution incident please call the Water Pollution Freephone Hotline in confidence with the location of the pollution incident and the nature of the pollution.

Abbreviations (Term_Explanation)
AFBI - Agri-Food and Biosciences Institute
ASSI - Areas of Special Scientific Interest
CCG - Connswater Community Greenway
CAFRE – College of Agriculture, Food & Rural Enterprise
DARD - Department of Agriculture and Rural Development
DOE - Department of the Environment
EP Ecological Potential – the status of a heavily modified water body measured against the maximum ecological quality it could achieve given the constraints imposed upon it by those heavily modified characteristics necessary for its use. There are 4 classes for the status of heavily modified water bodies : good ecological potential or better (GEP), moderate ecological potential (MEP), poor ecological potential (PEP) and bad ecological potential(BEP)
GSNI - Geological Survey of Northern Ireland
MSFD - Marine Strategy Framework Directive
NICMS - Northern Ireland Countryside Management Scheme
NIEA - Northern Ireland Environment Agency
PE – Population Equivalent
RHAT – River Hydro morphology Assessment Technique
SAC - Special Areas of Conservation
SPA - Special Protection Areas
WWTW - Waste Water Treatment Works

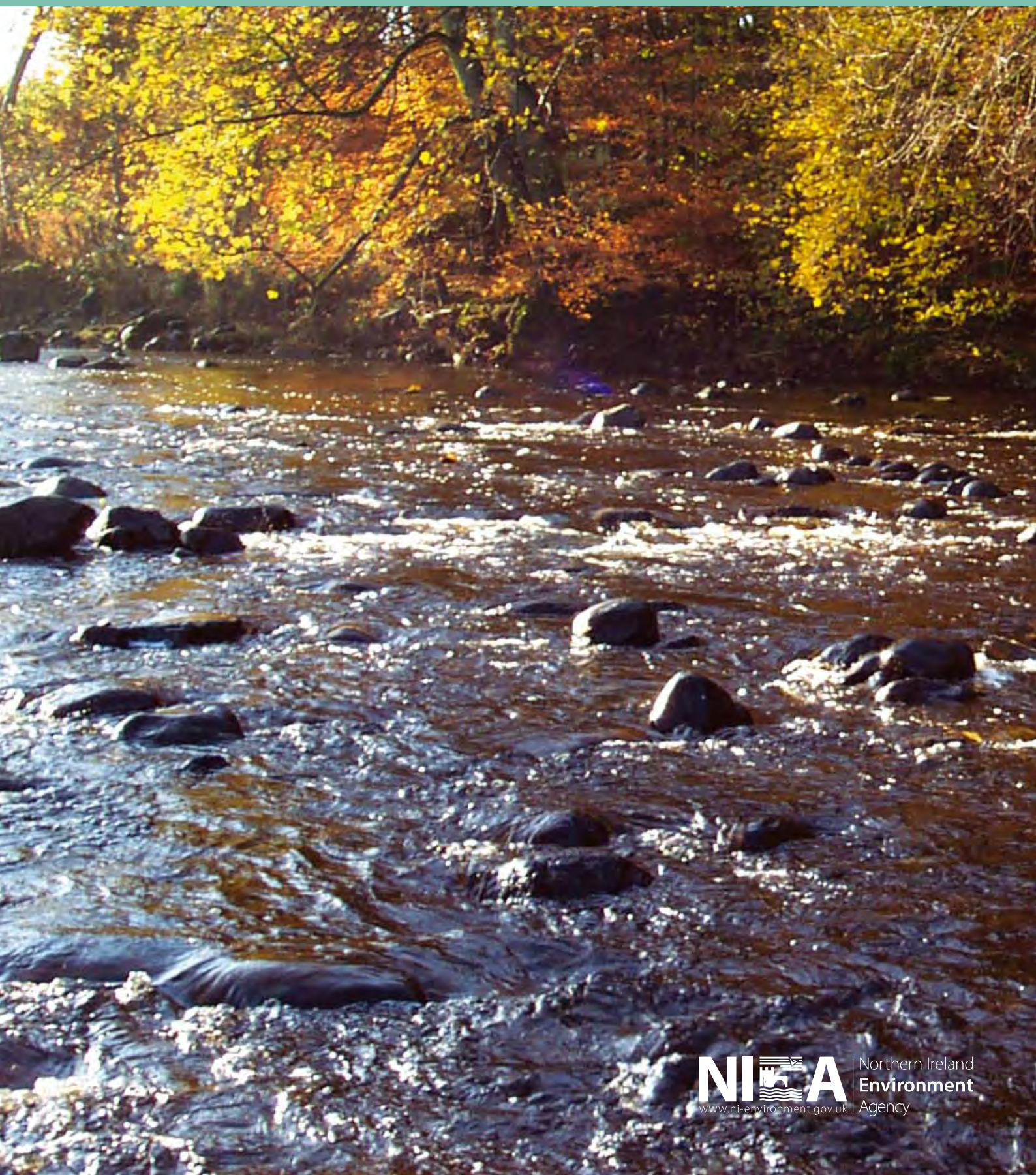
NIEA Northern Ireland Environment Agency
www.ni-environment.gov.uk

WATER POLLUTION HOTLINE
Freefone*
0800 80 70 60
*MOBILE CALLS CHARGED
24 HRS DAY, 7 DAYS A WEEK

Northern Ireland
Environment Agency

Action Plan 2010/2011

BALLINDERRY
Local Management Area



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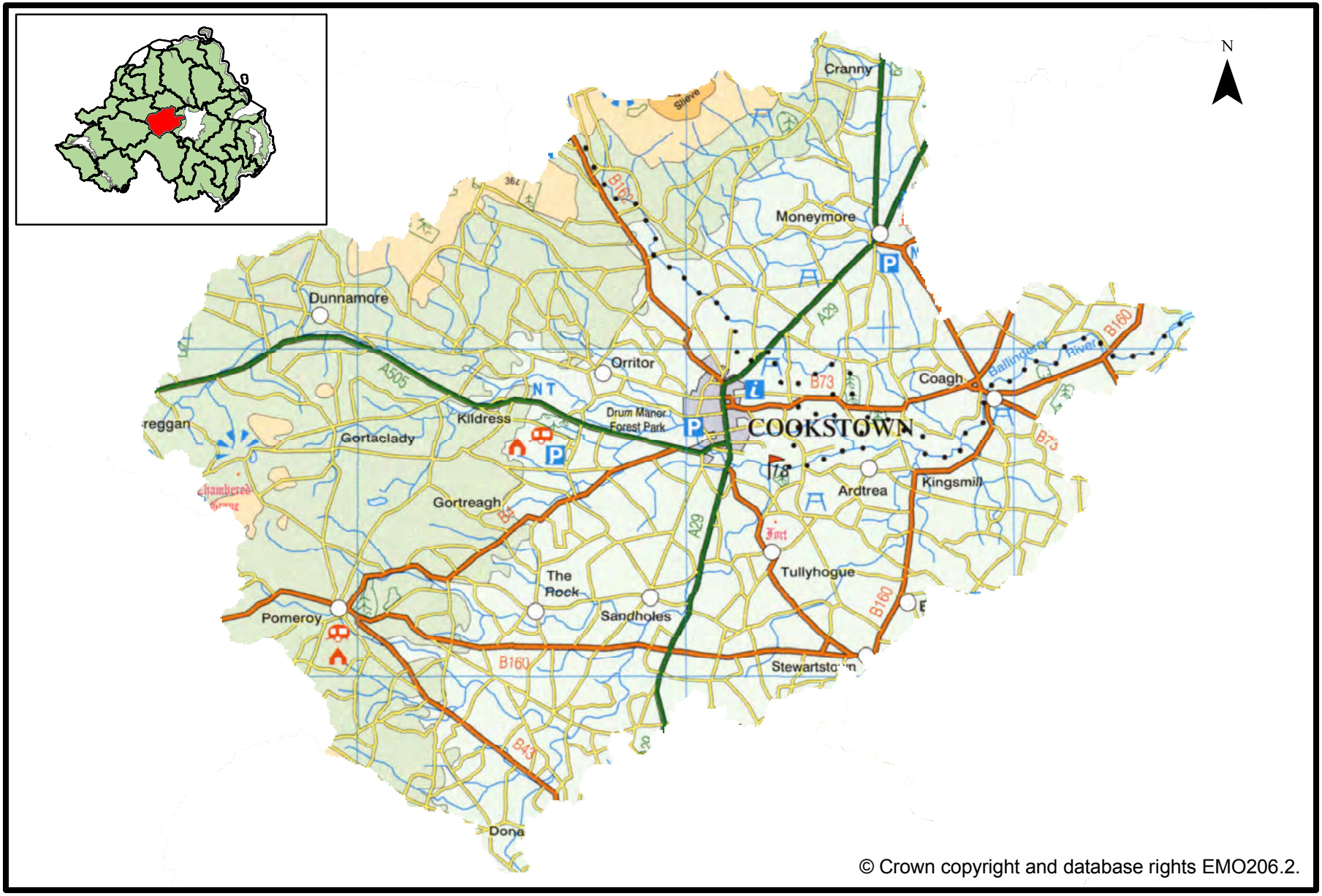
Map 1: Ballinderry Local Management Area



Introduction

River Basin Management Plans were published in December 2009. The plans describe where the water environment needs to be protected or improved, the timeframe to make these improvements and how that can be achieved. The plans will be implemented through Local Management Areas (LMAs) during the 2010 to 2015 planning cycle. This Ballinderry LMA Action Plan is one of a series of action plans that are being developed for the 26 LMAs across the Neagh Bann, North Western and North Eastern River Basin Districts. The action plan details local measures identified to improve the water environment.

River Basin Planning

NIEA, in partnership with other Departments and Agencies and with stakeholders, has developed a Programme of Measures to improve the water environment and to protect it from deterioration. There are also a number of existing plans and programmes that contribute to the management of our waters. Further details on the Programme of Measures, and the policy, legal and financial tools used to implement it, can be found on the Neagh Bann River Basin District Programme of Measures section on the NIEA website at
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-pom.htm

Ballinderry Local Management Area

The Ballinderry LMA (Map 1) covers an area of approximately 487km^2. The main town is Cookstown with two other towns, Pomeroy and Stewartstown. There are a number of significant villages in the catchment including Moneymore and Coagh and many more smaller villages and hamlets throughout the area. The Ballinderry and its tributaries are the main rivers within the LMA. The main land area is given over to improved grassland pasture.

A large number of water features within the area have been designated under various European Directives and require special protection. The management area drains into Lough Neagh, Northern Irelands largest Lough which is designated as a Specially Protected Area, RAMSAR site and Area of Special Scientific Interest. It is also designated under the Habitats, Birds and Freshwater Fish Directives. The northern part of the catchment borders the Sperrin Mountains and marginally includes the region which has been designated as an Area of Outstanding Natural Beauty.

The Ballinderry LMA has a freshwater pearl mussel population which is estimated to number less than 1000 individuals and is confined to 7.5 km of undrained and largely undisturbed channel of the Upper Ballinderry river in its middle reaches. It is one of the largest known of the five populations surviving in Northern Ireland.

There has been on-going stakeholder engagement within the LMA. The Ballinderry River Enhancement Association (BREA) (www.ballinderryriver.org) was established in 1984, and is dedicated to the conservation of the Ballinderry River, its freshwater species and habitats, its fisheries and the education and empowerment of the catchment community in the protection of the river. Work has been undertaken by

BREA's Ballinderry Fish Hatchery Ltd on the freshwater pearl mussel in partnership with Queen's University's researchers (Quercus) and funded by NIEA. Approximately 300 mussels have been released into stretches of the Ballinderry River and their progress carefully monitored. So far the study has been successful. Mussels are surviving well in their new environment and growing in the wild indicating that the habitat is suitable. More mussels will be released into the river next year with the hope that by mixing with the wild population they will once again be reproducing in their natural environment and sustaining themselves, without the need for human intervention (www.ballinderry river.org).

BREA is a member of the Association of Rivers Trusts (ART) (www.associationofriverstrusts.org.uk), a registered charity, and currently represents the interests of 8 angling clubs, 2 river clean up groups and a canoe club. BREA works in partnership with the local community, government departments and non-government organisations.

BREA have developed a community river plan through the Rivers Involving People, Places and Leading by Example (RIPPLE) project, jointly funded by WWF and the Heritage Lottery Fund. This project aims to celebrate the beauty and history of the Ballinderry River and its tributaries and to identify how the river could bring economic benefit to the area in the future.

NIEA support effective partnership working, with stakeholders such as BREA and ART, towards common interests in improving river catchments to bring wider environmental, community and social benefits. NIEA provide support to relevant actions within the RIPPLE Action Plan. Actions will include provision of waterside signage, participation in the annual Banks of the Balllinderry Fair, support for the Anglers Monitoring Initiative, project collaboration and membership of the RIPPLE advisory group.

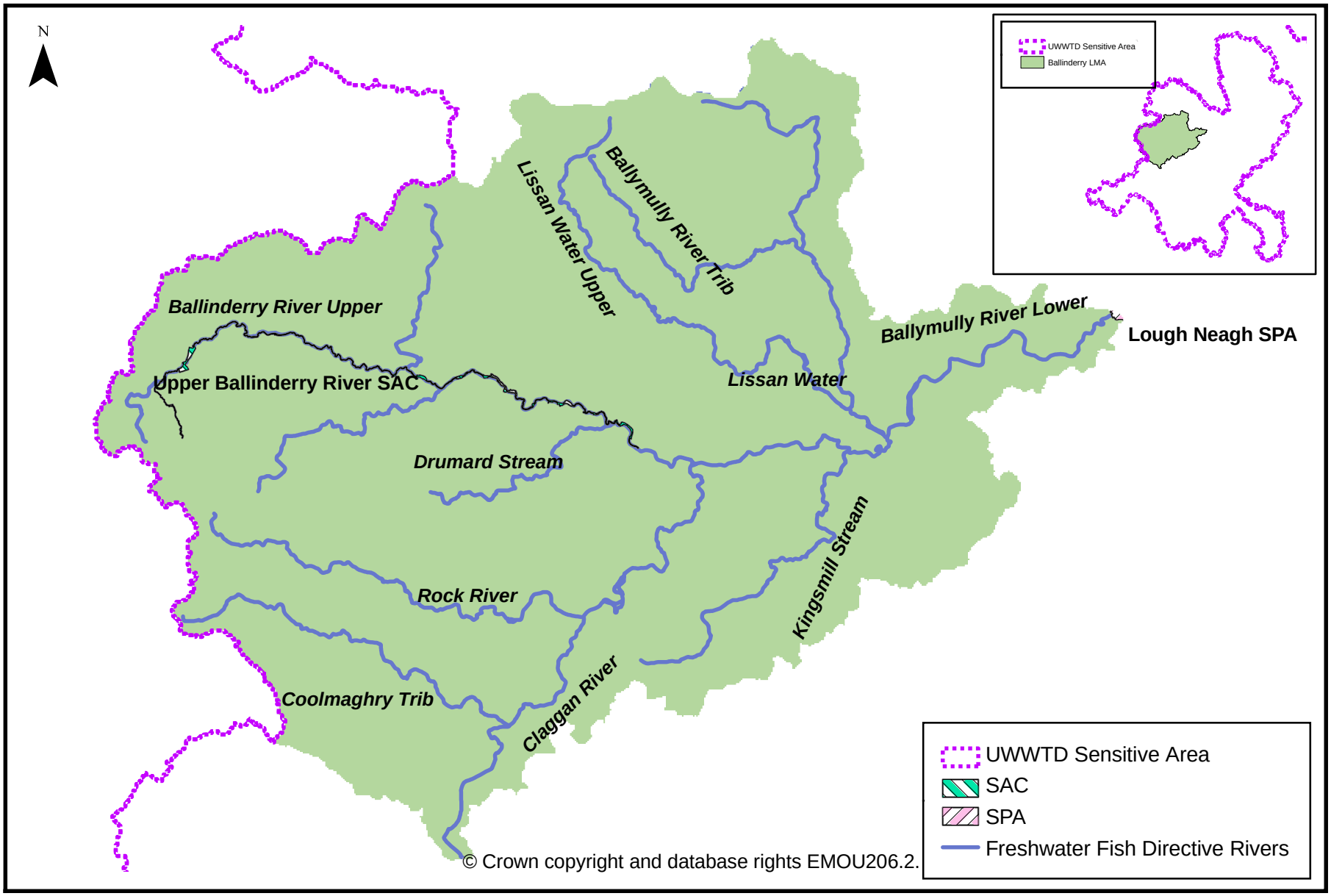
Protected Areas in Ballinderry LMA

The Ballinderry LMA supports important habitats and wildlife. These areas have been designated under European Directives and require special protection. The protected areas are summarised in Table 1 and shown in Map 2.

Table 1: Protected Areas in Ballinderry LMA

Protected Area Type	Location
Waters used for the abstraction of drinking water (drinking water protected areas)	There is 1 drinking water protected river There are 2 drinking water protected groundwaters
Areas designed to protect economically significant aquatic species Freshwater Fish Directive (78/659/EEC) Shellfish Waters Directive (79/923/EC)	There are 187 km of river identified under the Freshwater Fish Directive, all designated as salmonid There are no designated shellfish waters
Bathing Waters These are bathing waters identified under the Bathing Water Directive (76/160/EEC)	There are no identified bathing waters
Nutrient Sensitive Areas Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC) and the Nitrates Directive (91/676/EEC)	There is 1 Urban Waste Water Treatment Directive sensitive area; Lough Neagh A total territory approach has been adopted in Northern Ireland for the Nitrates Directive
Areas designated for the protection of habitats or species (Natura 2000 sites) These are areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection. Habitats Directive (92/43/EEC) Birds Directive (79/409/EEC)	There is 1 water dependent Special Area of Conservation (SAC); Upper Ballinderry River There is 1 water dependent Special Protection Area (SPA); Lough Neagh & Lough Beg SPA

Map 2: Ballinderry Protected Areas

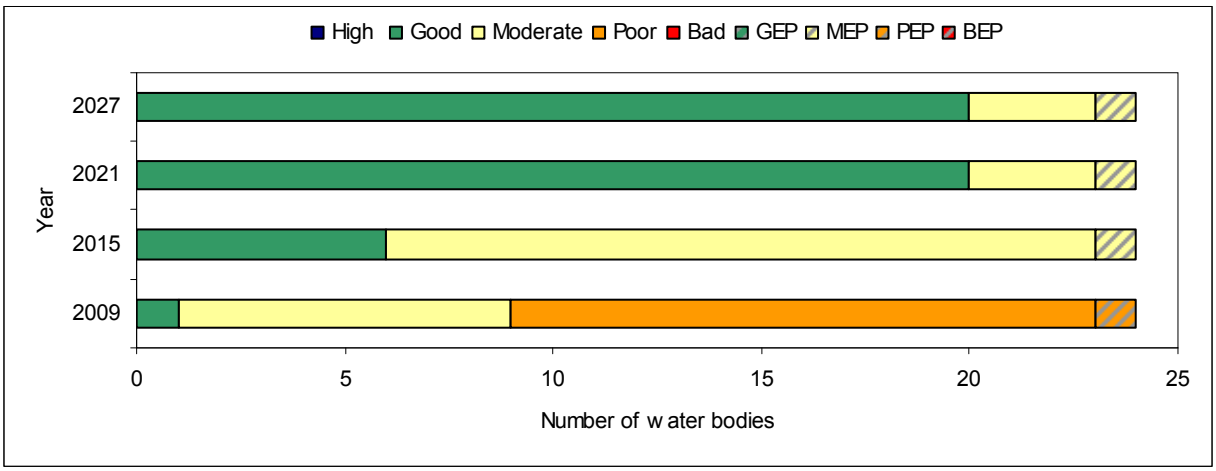


What improvements do we plan to achieve?

Surface Waters

The current status (as published in December 2009) and environmental objectives for surface waters (rivers) are shown in Figure 1. We aim to achieve good status or better in 25% of our surface water bodies by 2015, and moderate ecological potential (MEP) (for heavily modified water bodies) in 4% of our surface waters by 2015. Heavily modified water bodies are defined as water bodies that have been changed to such a degree that they can no longer be restored to their original condition without compromising their current use. For example, some waters have been deepened to allow for navigation; others have flood defences or have been dammed to provide a source of drinking water. The designation of the Ballinderry River water body at Cookstown (Map 3, reference 22) as a heavily modified water body is currently under review.

Figure 1: Current status and proposed objectives for surface waters in the Ballinderry LMA



Groundwater

The Ballinderry LMA contains parts of three groundwater bodies; Neagh, Cookstown and Moneymore. All groundwater bodies in this LMA are classified as good for both quantitative and chemical status. We aim to maintain good status in these groundwater bodies.

Action Plan[1]

The current status and environmental objectives for each water body within the Ballinderry LMA are summarised in Table 2. The Map Reference column can be used to identify the water bodies shown in Map 3. The water body map reference numbers are also shown in brackets after the water body names used later in the document. The planned actions for water bodies within the Ballinderry LMA are set out in the next section of this document.

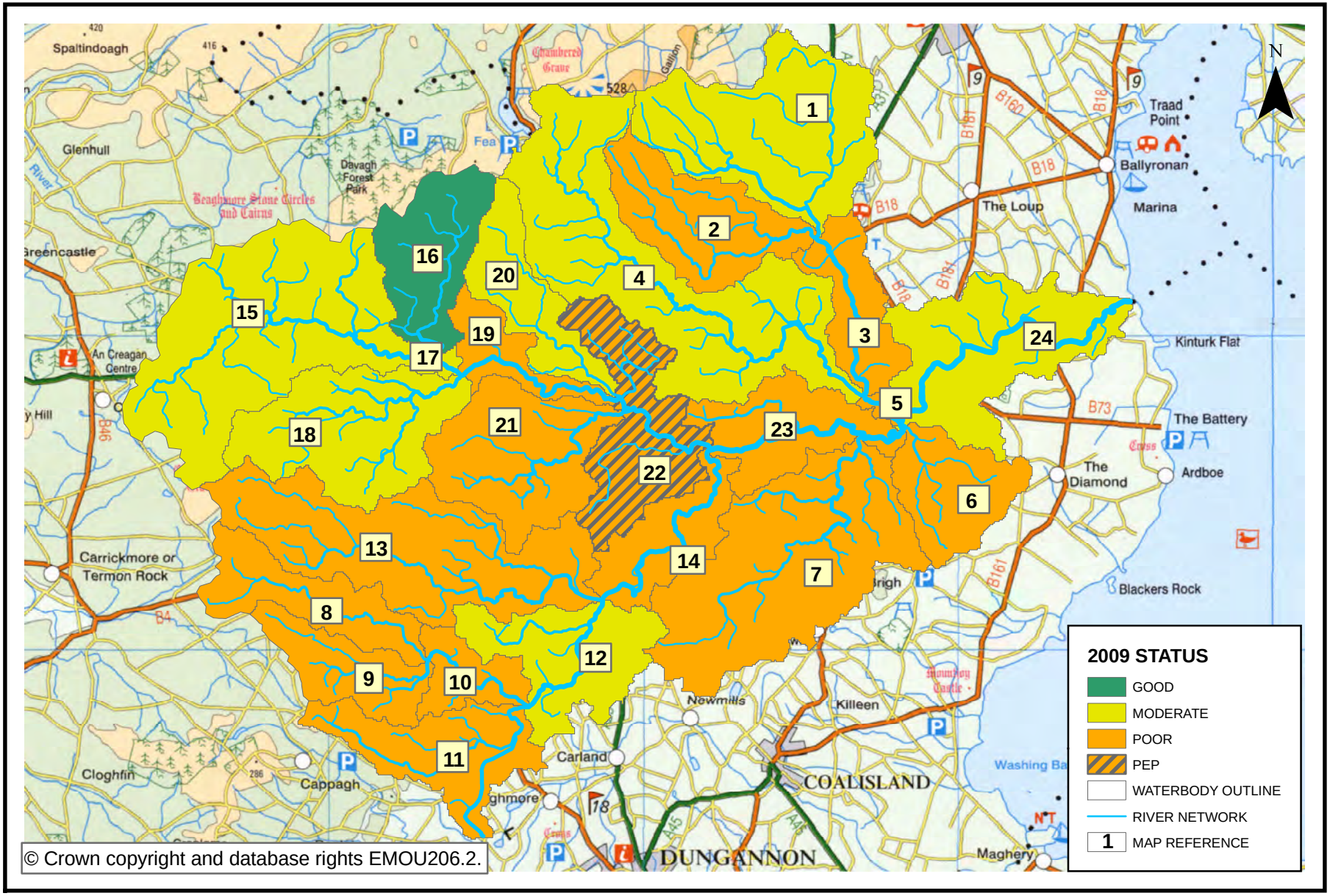
[1] A table of abbreviations is available at the end of this document

Table 2: Summary of current status and environmental objectives

Map Reference	Water Body Code	Water Body Name	2009 Status	2015 Objective	Page Number
1	UKGBNI1NB030304133	Ballymully River Upper	Moderate	Good	13
2	UKGBNI1NB030304057	Ballymully River [Slieve Gallion]	Poor	Moderate	15
3	UKGBNI1NB030304134	Ballymully River Floodplain	Poor	Moderate	17
4	UKGBNI1NB030304135	Lissan Water	Moderate	Good	19
5	UKGBNI1NB030304059	Ballymully River Lower	Poor	Moderate	21
6	UKGBNI1NB030304137	Aghaveagh Streams	Poor	Moderate	23
7	UKGBNI1NB030304138	Kingsmill River	Poor	Moderate	25
8	UKGBNI1NB030304178	Claggan River [Pomeroy]	Poor	Moderate	27
9	UKGBNI1NB030304179	Claggan River [Gortavoy]	Poor	Moderate	29
10	UKGBNI1NB030304055	Claggan River [Skea Bridge]	Poor	Moderate	31
11	UKGBNI1NB030304181	Claggan River [Donaghmore]	Poor	Moderate	33
12	UKGBNI1NB030304097	Claggan River [Lisnanane]	Moderate	Good	35
13	UKGBNI1NB030304177	Rock River	Poor	Moderate	37
14	UKGBNI1NB030304061	Killymoon River	Poor	Moderate	39
15	UKGBNI1NB030304240	Ballinderry River [Drumshanbo/Camlough]	Moderate	Moderate	41
16	UKGBNI1NB030304176	Tulnacross River	Good	Good	43
17	UKGBNI1NB030304053	Ballinderry River [Corkhill]	Moderate	Moderate	45
18	UKGBNI1NB030304054	Cloghfin River	Moderate	Good	47
19	UKGBNI1NB030304058	Ballinderry River [Tullagh/Wellbrook]	Poor	Moderate	49
20	UKGBNI1NB030304062	Gortin Water	Moderate	Moderate	51
21	UKGBNI1NB030304056	Drummard	Poor	Moderate	53
22	UKGBNI1NB030304060	Ballinderry River [Cookstown]	PEP	MEP	55

Map Reference	Water Body Code	Water Body Name	2009 Status	2015 Objective	Page Number
23	UKGBNI1NB030304063	Ballinderry River [Drapersfield/Killymoon]	Poor	Moderate	57
24	UKGBNI1NB030304136	Ballinderry River [Ballinderry/Coagh]	Moderate	Good	59

Map 3: Ballinderry Status



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Generic Actions applied throughout the Local Management Area.

Action to be taken	Action to be taken by	Make operational by	Water body types
NIEA to provide support to relevant actions within the Rivers Involving People, Places and Leading by Example (RIPPLE) Action Plan. Actions to include provision of waterside signage, participation in the annual Banks of the Balllinderry Fair, support for the Anglers Monitoring Initiative, project collaboration, membership of the RIPPLE advisory group etc.	DOE NIEA, BREA	Ongoing	Rivers
Raise awareness of the issue of pesticide use and disposal.	DOE NIEA	2011	All
Promote the NIEA Water Pollution Hotline through advertising, promotion and waterside signage.	DOE NIEA, Angling Clubs	Ongoing	Rivers, Lakes
Organise two Catchment Stakeholder Group meetings per year to provide an open forum for discussion on water issues and encourage involvement in developing and implementing the Local Management Area Plan.	DOE NIEA	Ongoing	All
Raise awareness of catchment management issues by release of relevant press articles and web publication of LMA e-zine. Support local community events.	DOE NIEA	Ongoing	All
Promote and encourage local projects through WATER Environment Community awards.	DOE NIEA	2010	All
Highlight external funding opportunities for water management projects to local partners.	DOE NIEA	Ongoing	All

Specific Actions applied throughout the Local Management Area where status or ecological potential is less than good.

Problem	Solution			
Failing Element	Action to be taken	Action to be taken by	Make operational by	Water body types
Benthic invertebrates, Macrophytes, Soluble Reactive Phosphorus, Ammonia, Dissolved Oxygen, Fish, Morphological conditions, Pearl Mussel	Support effective partnership working, between DOE NIEA and Ballinderry River Enhancement Association (BREA) as the local river trust in the Ballinderry LMA, towards common interests in improving river catchments to bring wider environmental, community and social benefits.	DOE NIEA, ART, BREA	Ongoing	Rivers
	Create inventory of physical structures in the river channel and apply the UK Fish Passability tool to identify selected obstacles which are causing a barrier to fish migration.	DOE NIEA, BREA	Ongoing	Rivers, Lakes
	Targeted education, advice and regulatory action to prevent pollution and protect the water environment.	DOE NIEA	2011	All
	Develop leaflets and articles to promote effective farm nutrient and waste management.	DOE NIEA DARD Countryside Management	2010	All
	Raise awareness and promote the benefits of effective farm nutrient and waste management.	DARD Countryside Management	2010	All
	Encourage riparian zone management with an aim to improve biodiversity and minimise sedimentation through practical management measures on farms.	DARD Countryside Management Branch	Ongoing	Rivers

	Promote best practice in the use of pesticides on farms.	DARD Countryside Management Branch	Ongoing	Rivers, Lakes
	Assess significance of sheep dip usage and review groundwater authorisations where appropriate.	DOE NIEA	2011	All
	Work with and support relevant local stakeholders and organisations such as BREA in raising awareness of environmental issues and projects. Seek to identify solutions to water management problems and develop and promote the LMA Action Plan.	DOE NIEA, BREA, local stakeholders	Ongoing	Rivers
	Support pollution prevention campaigns such as NIW's Bag it and Bin it Campaign, Local river clean ups etc.	DOE NIEA	Ongoing	All
	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010	All
	Collate existing information on location of aquatic invasive alien species.	DOE NIEA, BREA	2011	All
	Promote the control of invasive alien species on farmland.	DARD Countryside Management Branch	Ongoing	Rivers, Lakes
	Where appropriate provide support to the RIPPLE invasive species control programs taking into consideration recommendations from InterReg IVa study "Controlling invasive non-native riparian plants and restoring native biodiversity" and the Invasive Species Ireland project and invasive species strategy.	DOE NIEA, BREA	Ongoing	Rivers
	Conduct a water resource assessment to inform review of abstraction licenses for the Ballinderry LMA.	DOE NIEA	2010	Rivers, Lakes
	Review River's Agency maintenance program.	DOE NIEA, BREA	Ongoing	Rivers, Lakes
	Complete the phosphorus nutrient budget work for Northern Ireland.	AFBI	2011	All
	Review the relevance of the NI nutrient budget in the context of the Ballinderry LMA.	DOE NIEA	2011	All

Water body name:	Ballymully River Upper
Water body identification code:	UKGBNI1NB030304133
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	High
Dissolved oxygen:	Good
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballymully River [Upper] (1) #
Water body identification code: UKGBNI1NB030304133
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Ballymully River [Floodplain] (UKGBNI1NB030304134)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Investigate impact of forestry operations within forestry management units including Inishcarn. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, DARD Forest Service and/ or private landowners	2011
	2	Targeted river walk survey of stretch upstream of Churchill, Carrydarragh to investigate cause of biotic score depression. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	3	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	4	Investigate the impact of quarrying activities	DOE NIEA,	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballymully River [Slieve Gallion]
Water body identification code:	UKGBNI1NB030304057
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Medium)

Benthic invertebrates:	Poor
Macrophytes:	Good
Dissolved oxygen:	Moderate
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Moderate
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballymully River [Slieve Gallion] (2) #
Water body identification code: UKGBNI1NB030304057
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Ballymully River [Floodplain] (UKGBNI1NB030304134)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Dissolved oxygen	1	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2011
	2	Investigate dissolved oxygen suppressions	DOE NIEA	2011
	3	Compliance assessment of Moneymore WWTW (>250PE) to inform future upgrades.	DOE NIEA,	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballymully River Floodplain
Water body identification code:	UKGBNI1NB030304134
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Poor
Macrophytes:	Good
Dissolved oxygen:	Good
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballymully River [Floodplain] (3) #
Water body identification code: UKGBNI1NB030304134
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies: Ballymully River [Upper] (UKGBNI1NB030304133) Ballymully River [Slieve Gallion] (UKGBNI1NB030304057)
Downstream water body: Ballymully River [Lower] (UKGBNI1NB030304059)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Investigate impact of forestry operations within Springhill Forest. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, DARD Forest Service and/ or private landowners	2011
	3	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA, NIWL	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Lissan Water
Water body identification code:	UKGBNI1NB030304135
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Moderate
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Lissan Water (4) #
Water body identification code: UKGBNI1NB030304135
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Ballymully River [Lower] (UKGBNI1NB030304059)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Morphological conditions	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2011
	3	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2011
	4	Targeted education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	5	Investigate sedimentation management at the confluence of the Ballymully and Lissan Water.	DOE NIEA	2011
	6	Assess sources of organic pollution including at identified sites of concern.	DOE NIEA	2011
	7	Investigate impact of forestry operations within Lissan Demesne. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, DARD Forest Service and Friends of Lissan House	2011
	8	Targeted river walk survey of stretch upstream of Little Bridge, Ballyloughan, Coagh to investigate cause of biotic score depression. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	9	Targeted river walk survey of stretch adjacent to Lismoney Road, Cookstown to investigate cause of biotic score depression. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballymully River Lower
Water body identification code:	UKGBNI1NB030304059
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Medium)

Benthic invertebrates:	Poor
Macrophytes:	Moderate
Dissolved oxygen:	Good
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Moderate
Biochemical oxygen demand*:	Poor
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballymully River [Lower] (5) #
Water body identification code: UKGBNI1NB030304059
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies: Ballymully River [Floodplain] (3)
(UKGBNI1NB030304134) Lissan Water
(UKGBNI1NB030304135)
Downstream water body: Ballinderry River [Ballinderry/Coagh]
(UKGBNI1NB030304136)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes, Ammonia	1	Principal pressures within this small water body are from upstream water bodies GBNI1NB030304134 (Ballymully) and GBNI1NB030304135 (Lissan Water) refer to actions for these water bodies	DOE NIEA	2011
	2	Investigate ammonia elevations	DOE NIEA	2011
	3	Investigate sedimentation management at the confluence of the Ballymully and Lissan Water.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Aghaveagh Streams
Water body identification code:	UKGBNI1NB030304137
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	No type has been assigned
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Not measured)

Hydrological regime:	High
Morphological conditions:	Moderate

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Aghaveagh streams (6) #
Water body identification code: UKGBNI1NB030304137
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Ballinderry River [Ballinderry/Coagh] (UKGBNI1NB030304136)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Pressures and Impact assessment	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Further investigative chemical and biological monitoring required to ascertain classification status.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Kingsmill River
Water body identification code:	UKGBNI1NB030304138
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity >200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Poor
Macrophytes:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Kingsmill River (7) #
Water body identification code: UKGBNI1NB030304138
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Ballinderry River [Drapersfield/Killymoon] (UKGBNI1NB030304063)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates, Macrophytes	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Conduct river walk longitudinal survey to investigate possible causes of invertebrate suppression including agricultural and urban run-off. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	3	Assess sources of organic pollution including at identified sites of concern.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Claggan River [Pomeroy]
Water body identification code:	UKGBNI1NB030304178
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Medium)

Benthic invertebrates:	Poor
Macrophytes:	Good
Dissolved oxygen:	Good
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Claggan River [Pomeroy] (8) #
Water body identification code: UKGBNI1NB030304178
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Claggan River [Skea Bridge] (UKGBNI1NB030304055)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Investigate downstream impacts of Pomeroy WWTWs < 250 PE and review performance if necessary.	DOE NIEA	2011
	2	Investigate impact of forestry operations in the Pomeroy Forestry Management Unit. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, DARD Forest Service	2011
	3	Conduct river walk longitudinal survey to investigate possible causes of invertebrate suppression including agricultural and urban run-off. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Claggan River [Gortavoy]
Water body identification code:	UKGBNI1NB030304179
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Poor
(Confidence in overall status:	Medium)

Benthic invertebrates:	Poor
Macrophytes:	Good
Dissolved oxygen:	Good
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Claggan River [Gortavoy] (9) #
Water body identification code: UKGBNI1NB030304179
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Claggan River [Skea Bridge] (UKGBNI1NB030304055)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Conduct river walk longitudinal survey to investigate possible causes of invertebrate suppression including agricultural and urban run-off. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Claggan River [Skea Bridge]
Water body identification code:	UKGBNI1NB030304055
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Medium)

Benthic invertebrates:	Poor
Macrophytes:	Good
Dissolved oxygen:	Good
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Claggan River [Skea Bridge] (10) #
Water body identification code: UKGBNI1NB030304055
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies: Claggan River [Pomeroy] (UKGBNI1NB030304178) Claggan River [Gortavoy] (UKGBNI1NB030304179)
Downstream water body: Claggan River [Lisnanane] (UKGBNI1NB030304097)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2011
	2	Assess sources of organic pollution including at identified sites of concern.	DOE NIEA	2011
	3	Conduct river walk longitudinal survey to investigate possible causes of invertebrate suppression including agricultural and urban run-off. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Claggan River [Donaghamore]
Water body identification code:	UKGBNI1NB030304181
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Poor
Macrophytes:	Poor
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Claggan River [Donaghmore] (11) #
Water body identification code: UKGBNI1NB030304181
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Claggan River [Lisnanane] (UKGBNI1NB030304097)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes	1	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2012
	2	Conduct river walk longitudinal survey to investigate possible causes of invertebrate suppression including agricultural and urban run-off. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	3	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Claggan River [Lisnanane]
Water body identification code:	UKGBNI1NB030304097
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	Moderate
Dissolved oxygen:	Good
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Moderate
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Claggan River [Lisnanane] (12) #
Water body identification code: UKGBNI1NB030304097
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Claggan River [Skea Bridge] (UKGBNI1NB030304055) Claggan River [Donaghmore] (UKGBNI1NB030304181)
Downstream water body: Killymoon River (UKGBNI1NB030304061)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes	1	Conduct river walk longitudinal survey to investigate possible causes of invertebrate suppression including agricultural and urban run-off. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Rock River
Water body identification code:	UKGBNI1NB030304177
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 50-100 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Poor
Macrophytes:	Good
Fish:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Rock River (13) #
Water body identification code: UKGBNI1NB030304177
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Killymoon River (UKGBNI1NB030304061)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic Invertebrates, Fish	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Investigate impact of forestry operations in the Pomeroy Forestry Management Unit. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, DARD Forest Service	2011
	3	Targeted river walk of stretch upstream of Loughbracken Road, Pomeroy. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
	4	Assess sources of organic pollution including at identified sites of concern.	DOE NIEA	2011
	5	Monitor fish populations at selected sites. Review other available fish data.	DCAL, BREA	Ongoing
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Killymoon River
Water body identification code:	UKGBNI1NB030304061
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Poor
Macrophytes:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Moderate
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Killymoon River (14) #
Water body identification code: UKGBNI1NB030304061
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies: Claggan River [Lisnanane]
(UKGBNI1NB030304097) Rock River
(UKGBNI1NB030304177)
Downstream water body: Ballinderry River [Drapersfield/Killymoon]
(UKGBNI1NB030304063)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2010
	3	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2011
	4	Investigate agricultural practices and facilities at specified locations within the waterbody to ensure appropriate measures in place to minimise environmental risk.	DOE NIEA	2011
	5	Targeted education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	6	Investigate the impact of quarrying activities	DOE NIEA,	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballinderry River [Drumshanbo/Camlough]
Water body identification code:	UKGBNI1NB030304240
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Moderate Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	High)

Benthic invertebrates:	Good
Macrophytes:	Good
Pearl mussel:	Moderate
Dissolved oxygen:	Good
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballinderry River [Drumshanbo/Camlough] (15) #

Water body identification code: UKGBNI1NB030304240

2009 status: Moderate

2015 Objective: Good

Upstream water bodies:

Downstream water body: Ballinderry River [Corkhill] (UKGBNI1NB030304053)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Pearl Mussel	1	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	2	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	3	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	4	Consider site restoration and protection methods to reduce sedimentation and improve habitat for the Freshwater Pearl Mussel.	INTERREG IVA	2011
	5	Continue support for the BREA Freshwater Pearl Mussel breeding programme	NIEA, BREA	Ongoing
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Tulnacross River
Water body identification code:	UKGBNI1NB030304176
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Good
(Confidence in overall status:	High)

Benthic invertebrates:	High
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Tulnacross River (16) #
Water body identification code: UKGBNI1NB030304176
2009 status: Good
2015 Objective: Good
Upstream water bodies:
Downstream water body: Ballinderry River [Corkhill] (UKGBNI1NB030304053)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
	1	Maintain current regulatory controls as waterbody status is Good	DOE NIEA	2015
	2	Visual inspection of Corvanaghan and Tulnacross WWTWs (<250 PE) to inform future upgrades.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballinderry River [Corkhill]
Water body identification code:	UKGBNI1NB030304053
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Moderate Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	High
Macrophytes:	High
Fish:	Moderate
Pearl mussel:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	High
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballinderry River [Corkhill] (17) #
Water body identification code: UKGBNI1NB030304053
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Ballinderry River [Drumshanbo/Camlough] (UKGBNI1NB030304240) Tulnacross River (UKGBNI1NB030304176)
Downstream water body: Ballinderry River [Tullagh/Wellbrook] (UKGBNI1NB030304058)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Fish	1	Principal pressures within this small water body are from upstream water bodies GBNI1NB030304240 (Ballinderry River) and GBNI1NB030304176 (Ballinderry River tributary) refer to these waterbodies for action	DOE NIEA	2011
	2	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	3	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	4	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	5	Consider site restoration and protection methods to reduce sedimentation and improve habitat for the Freshwater Pearl Mussel.	INTERREG IVA	2011
	6	Continue support for the BREA Freshwater Pearl Mussel breeding programme	NIEA, BREA	Ongoing
	7	Monitor fish populations at selected sites. Review other available fish data.	DCAL, BREA	Ongoing
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Cloghfin River
Water body identification code:	UKGBNI1NB030304054
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude >80m, alkalinity 50-100 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	High
Dissolved oxygen:	High
Soluble reactive phosphorus:	High
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Cloghfin River (18) #
Water body identification code: UKGBNI1NB030304054
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Ballinderry River [Tullagh/Wellbrook] (UKGBNI1NB030304058)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2011
	2	Investigate the impact of quarrying activities	DOE NIEA,	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballinderry River [Tullagh/Wellbrook]
Water body identification code:	UKGBNI1NB030304058
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Moderate Status
2027 Objective:	Moderate Status
The type of this water body is:	Altitude <80m, alkalinity 50-100 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Moderate
Macrophytes:	Poor
Pearl mussel:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballinderry River [Tullagh/Wellbrook] (19) #
Water body identification code: UKGBNI1NB030304058
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies: Ballinderry River [Corkhill] (UKGBNI1NB030304053) Cloghfin River (UKGBNI1NB030304054)
Downstream water body: Ballinderry River [Cookstown] (UKGBNI1NB030304060)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA, DARD	2011
	3	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2011
	4	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	5	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	6	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	7	Consider site restoration and protection methods to reduce sedimentation and improve habitat for the Freshwater Pearl Mussel.	INTERREG IVA	2011
	8	Continue support for the BREA Freshwater Pearl Mussel breeding programme	NIEA, BREA	Ongoing
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Gortin Water
Water body identification code:	UKGBNI1NB030304062
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Alkalinity 10-50 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Good
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	Moderate
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Good

Hydrological regime:	High
Morphological conditions:	Moderate

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Gortin Water (20) #
Water body identification code: UKGBNI1NB030304062
2009 status: Moderate
2015 Objective: Good
Upstream water bodies:
Downstream water body: Ballinderry River [Cookstown] (UKGBNI1NB030304060)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Soluble Reactive Phosphorus	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2011
	3	Investigate phosphate budgets reduction measures for soluble reactive phosphorous	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Drummard
Water body identification code:	UKGBNI1NB030304056
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Poor
Macrophytes:	Good
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	Good
Biochemical oxygen demand*:	Moderate
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Drummard (21) #
Water body identification code: UKGBNI1NB030304056
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies:
Downstream water body: Ballinderry River [Cookstown] (UKGBNI1NB030304060)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Investigate impact of forestry operations in Drum Manor Forest Park. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, DARD Forest Service and/ or private landowners	2011
	2	The River Involving People Places and leading by Example (RIPPLE) project are carrying out a community led invasives species control programme	BREA	Ongoing
	3	Targeted education, advice and regulatory action to prevent pollution and protect the water environment	DOE NIEA	2011
	4	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2011
	5	Assess sources of organic pollution including at identified sites of concern.	DOE NIEA	2011
	6	Targeted river walk survey of Drumard stream upstream of Tirnaskea Bridge to investigate cause of biotic score depression. River walk should determine and address sources of organic pollution affecting benthic invertebrates and resulting in low biotic scores and/or observed sewage fungus.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballinderry River [Cookstown]
Water body identification code:	UKGBNI1NB030304060
	This is a heavily modified water body.
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate ecological potential
2021 Objective:	Moderate ecological potential
2027 Objective:	Moderate ecological potential
The type of this water body is:	Altitude <80m, alkalinity 50-100 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current ecological potential:	Poor
(Confidence in ecological potential:	Low)

Benthic invertebrates:	Moderate
Macrophytes:	Poor
Pearl mussel:	Moderate
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-heavily-modified.htm

Water body name: Ballinderry River [Cookstown] (22) #
Water body identification code: UKGBNI1NB030304060
2009 status: Poor Ecological Potential
2015 Objective: Moderate Ecological Potential
Upstream water bodies: Ballinderry River [Tullagh/Wellbrook]
(UKGBNI1NB030304058) Gortin Water
(UKGBNI1NB030304062) Drummard Water
(UKGBNI1NB030304056)
Downstream water body: Ballinderry River [Drapersfield/Killymoon]
(UKGBNI1NB030304063)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Carryout Rapid Hydro morphology Assessment Technique (RHAT) survey to ground truth original Heavily Modified Water Body (HMWB) designation. A case for de-designation has been recommended.	DOE NIEA	2010
	3	Target Pollution Prevention advice to industrial premises and investigate any unconsented industrial discharges. Where required ensure Water Order consent is obtained.	DOE NIEA	Ongoing
	4	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2011
	5	Identify river remedies and possible options to improve Freshwater Pearl Mussel conditions and enhance recruitment	INTERREG IVA	2011
	6	Develop action plans for designated Freshwater Pearl Mussel Special Areas of Conservation	INTERREG IVA	2011
	7	Assessment of river conditions through research and river surveys to locate sources of sediment	INTERREG IVA	2011
	8	Consider site restoration and protection methods to reduce sedimentation and improve habitat for the Freshwater Pearl Mussel.	INTERREG IVA	2011
	9	Continue support for the BREA Freshwater Pearl Mussel breeding programme	NIEA, BREA	Ongoing
	10	Investigate gravel and sand extraction activities to the south of Cookstown and take appropriate regulatory action where appropriate.	DOE NIEA	2011
	11	Investigate the impact of quarrying activities	DOE NIEA,	2011
	12	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballinderry River [Drapersfield/Killymoon]
Water body identification code:	UKGBNI1NB030304063
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Moderate Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1a - At risk
Current overall status:	Poor
(Confidence in overall status:	Low)

Benthic invertebrates:	Moderate
Macrophytes:	Poor
Dissolved oxygen:	High
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High

Dissolved copper:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballinderry River [Drapersfield/Killymoon] (23) #
Water body identification code: UKGBNI1NB030304063
2009 status: Poor
2015 Objective: Moderate
Upstream water bodies: Kingsmill River (UKGBNI1NB030304138)
Killymoon River (UKGBNI1NB030304061)
Ballinderry River [Cookstown]
(UKGBNI1NB030304060)
Downstream water body: Ballinderry River [Ballinderry/Coagh]
(UKGBNI1NB030304136)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates, Macrophytes	1	NIEA to provide support to the BREA Anglers Monitoring Initiative - A community led water quality monitoring programme.	DOE NIEA, BREA	Ongoing
	2	Investigate impact of forestry operations within Drummond Park. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, DARD Forest Service and/ or private landowners	2011
	3	Investigate downstream impacts of discharges from industrial premises where problem has been identified to establish potential sources of pollution.	DOE NIEA	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Water body name:	Ballinderry River [Ballinderry/Coagh]
Water body identification code:	UKGBNI1NB030304136
Catchment stakeholder group:	Upper Neagh Bann
Local management area:	Ballinderry
2015 Objective:	Good Status
2021 Objective:	Good Status
2027 Objective:	Good Status
The type of this water body is:	Altitude <80m, alkalinity 100-200 (as mg/l of $CaCO_3$)
2005 risk assessment:	1b - Likely to be at risk
Current overall status:	Moderate
(Confidence in overall status:	Medium)

Benthic invertebrates:	Moderate
Macrophytes:	Good
Dissolved oxygen:	Good
Soluble reactive phosphorus:	Good
pH:	High
Ammonia:	High
Biochemical oxygen demand*:	Good
Temperature*:	High

Hydrological regime:	High
Morphological conditions:	Moderate

Atrazine:	Good
Chlorfenvinphos:	Good
Chloroform (trichloromethane):	Good
Chlorpyriphos:	Good
Dissolved copper:	Good
Carbon tetrachloride:	Good
Diazinon:	Good
1,2-Dichloroethane:	Good
Fenitrothion:	Good
Malathion:	Good
Phenol:	Good
Simazine:	Good
Tetrachloroethylene:	Good
Trichloroethylene:	Good
Triazaphos:	Good
Total zinc:	Good

* This element does not contribute to overall classification.

For more information on the classification process see:
http://www.doeni.gov.uk/niea/water-home/wfd/neagh_bann_rbp/neagh-riversandlakes.htm

Water body name: Ballinderry River [Ballinderry/Coagh] (24) #
Water body identification code: UKGBNI1NB030304136
2009 status: Moderate
2015 Objective: Good
Upstream water bodies: Ballymully River [Lower] (UKGBNI1NB030304059) Aghaveagh streams (UKGBNI1NB030304137) Ballinderry River [Drapersfield/Killymoon] (UKGBNI1NB030304063)
Downstream water body: Lough Neagh (UKGBNI3NB0032)

Problem	Solution			
Failing Element		Action to be taken	Action to be taken by	Make operational by
Benthic invertebrates	1	Assess sources of organic pollution including agriculture, NIW intermittent discharges, WWTW, sewage pumping stations and septic tanks (domestic and private).	DOE NIEA	2011
	2	Investigate the impact of Gammarus Pulex on river ecology in affected tributaries	DOE NIEA	2011
	3	Investigate impact of forestry operations within Birchwood Forest. Ascertain felling programme in the catchment and engage with forestry technical field staff / private landowners to ensure measures are in place to mitigate risks from felling.	DOE NIEA, DARD Forest Service and/ or private landowners	2011
		A number of catchment wide actions also apply to this water body. These can be found on Page 11.		

number in brackets refers to Map 3.

Abbreviations

Term	Explanation
AFBI	Agri-Food and Biosciences Institute
ART	Association of Rivers Trusts
BREA	Ballinderry River Enhancement Association
DARD	Department of Agriculture and Rural Development
DCAL	Department of Culture, Arts and Leisure
DOE	Department of the Environment
EP	Ecological Potential – the status of a heavily modified water body measured against the maximum ecological quality it could achieve given the constraints imposed upon it by those heavily modified characteristics necessary for its use. There are 4 classes for the status of heavily modified water bodies: good ecological potential or better (GEP), moderate ecological potential (MEP), poor ecological potential (PEP) and bad ecological potential (BEP).
INTERREG IVA	The INTERREG IVA Programme for Northern Ireland, the Border Region of Ireland and Western Scotland is a European Union supported Structural Funds Programme which seeks to address the economic and social problems which result from the existence of borders. It supports strategic cross-border co-operation for a more prosperous and sustainable region.
NIEA	Northern Ireland Environment Agency
NIWL	Northern Ireland Water Limited
WWTW	Waste Water Treatment Works

Northern Ireland Environment Agency
www.ni-environment.gov.uk

Our aim is to protect, conserve and promote the natural environment and built heritage for the benefit of present and future generations.

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